Library Construction Report

This report covers the period up to July 7th. Photos are included in the attached Power Point

Blasting

A pre-blast survey was performed on all homes within a 250-foot radius of the property prior to the blasting beginning.

Blasting began in late May with everything going as expected.

Maine Drilling and blasting performed 3-4 blasts per day over a period of 8 days. They set up seismographs next to the Young's house and next to the Earle house (formerly the Scott property) and recorded every blast. In addition, they videotaped every blast for their records.

They have a threshold of a reading of "2" for their blasts, as a standard that they use.

According to the supervisor, a reading of "5" may cause sheetrock to crack. Except for one blast that reached a "2", all blasts were significantly less than that level, at each of the seismographs.

The blasts next to the Earle house were the most difficult as they were so close to the property line. The blast team was very careful and diligent throughout the process and in particular, on those 3 or 4 blasts. It was made even more problematic as the blast for the elevator shaft is at that end of the property and was several feet lower than the rest of the site.

To the best of my knowledge there has only been one report of any potential damage caused by the blasting. It was a stone retaining wall across the street that appeared to be leaning more than previously. It is being reviewed by MD&B

Unknown Drainage System

Once the blasting was complete, Farley arrived on site in early June to begin the stream work and excavation. Before starting, they removed a large tree stump that was left after the removal of the trees along Limerock street.

This was the first sign of the skill and abilities of the excavator operator. While beginning to remove the stump, he felt that there was something else he was dealing with, under the stump.

While I am not an expert on trees, that tree has been around a long time. Probably nearly 100 years.

Under the stump was an old clay and brick drainpipe that was unknown and unrecorded in any of our records. We did not know where it originated but we did establish that it connected to the existing drainage system that leads to the harbor by dye testing it. It appeared to lead up in the vicinity of the Anderson house at the north end of the park. After an inspection of the basement, we found that there were basement drains, but they all "daylighted" into the Anderson's front lawn and the park.

It is believed that it drains a wet area above the Anderson house and before Huse Street, but that was never found. Mike will work on finding the origination point.

As there was water flowing through the pipe it had to be reconnected and covered over with a temporary fix. This repair was outside of the library project and was covered out of the PWD budget. It will have to be addressed as we move into Limerock St. and parking reconstruction next summer.

Stream reconstruction

Initially it was believed that the stream work would begin before or in conjunction with the blasting operations, however after consultations with the contractors it was decided that the best course of action was to blast first, reconstruct the stream and then do the bulk of the excavation last.

The stream work began on in mid-june and went better than expected. We were able to use stone and material that was onsite to lay back the stream wall. Once work was started, we established that a short section of the Young's side of the stream would likely collapse when we began work. The Young's agreed to allow us to replace that side of the wall, that would be damaged as a result of our work. This additional work resulted in a $9,000 change order, that the Town had to pay, as it was outside of the building construction contract. It was covered under the 2019 PWD budget along with the original $30,000 construction cost.

Because of the unusually wet spring water was diverted by 3 pumps bypassing the stream bed for 90% of the water.

When construction was nearly completed, we had a large rainstorm depositing nearly 3.5 inches of rain on Rockport (we were ground zero) and the stream was running full force. Even though not complete the new construction handled the torrent of water, better than we had hoped. The Young's reported that for the first time in many years their basement did not end up with several feet of water in it.

The new construction lays back the stream wall on an angle, rather than a nearly vertical wall that resulted in a severe restriction during heavy flows. This restriction filled the ditch beyond capacity and overflowed into the Young's basement with every large storm.

The stream banks have been completed and the base stones were pinned with rebar to the underlying ledge to keep them from moving inward.

Further up the stream existing ledge outcropping was able to be used to create a more natural looking stream bank up nearest the Young's back yard. Because we were able to use existing stone from the site we have a good mix of larger and smaller stone, which over time will look more natural than specifically sized 'rip rap" as planned. The care and precision that the operator used in setting the stones makes for a very nice looking "constructed" banking.

Excavation

The excavation began in as the stream was being completed later in June and once again went as expected. The blasters fractured all of the ledge they needed to and did not have to be called back to re-blast anything.

The site was excavated down to below the depth of the final floor to allow for footings and perimeter drains around the foundation. Where three of the four walls at the lower level, are below grade a great deal of care has gone into the design of the waterproofing and drainage around that level of the building. The good news is that with all of that excavation, the only water discovered was in the lowest level of the elevator shaft footings. It was discovered when installing the underdrains for that lowest depth and the drainage pipe will transmit that water from the pit to the catch basin on Russel Ave. Those underdrains have also been installed as well.

The underdrain will remove that water and divert it to the catch basin. The elevator shaft (4 feet below the final floor) will contain a sump pump, to remove water, in the unlikely event any water collected at the bottom of that pit. That water will get pumped to the underdrain system and to the catch Basin on Russel Ave.

Because of the closeness of the excavation to the Earle house the work had to be done very carefully. Again, because if the skill of the operator it was completed without issue. Because of the steepness of all of the banks, they were covered with a protective tarp to prevent erosion due to the rain and then covered with a safety fence to prevent any loose stones from falling on workers.

The whole building footprint was leveled and where needed, brought up to grade in preparations for the concrete contractor to arrive on Monday July 6th. This work will be covered in the next report.